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AN EXPERIMENT IN GEOGRAPHY AND HISTORY WITH A SIXTH GRADE

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IN the Bancroft School, a private school in the city of Worcester, Massachusetts, the allotment of time for geography has been two periods of thirty minutes each per week; for history, three periods of the same length each week. The object of the geography work was to furnish the pupils with a general knowledge of the world preparatory to the more detailed study of each grand division; the aim of the history work was an understanding, as far as the ages of the pupils permitted, of the progress of events and the evolution of governments. The objectives of the two courses were of such a nature that they easily lent themselves to a combination and the periods were given over to the presentation of geography through the medium of the myths and histories of the different countries. This idea is, in varying degrees of efficiency, in operation in many schools. Incidental and scant references were found scattered throughout the literature of geography and history. No aid of appreciable amount, however, was obtained in these directions. Browsing over the literature of the different countries yielded the best returns. During an entire school year the scheme was tried in the sixth grade of the Bancroft School and the results of the trial were not anticipated even in the optimistic views of the instigators.

A brief outline of the stories, with some references to their sources, may be worthy of presentation. The arrangement of the subject matter is not in all cases logical, and in some instances chronological sequence has been set aside. We are not presenting the material as the best that can be evolved but as a pioneer effort, worked out, to some degree, under the stress of the inspiration and enthusiasm awakened in the class. The

method of presentation, while it was by no means uniform, may be illustrated by brief examples.

ALEXANDER, THE GREAT

A map of Greece and Macedonia and the western coast of Asia was drawn on the blackboard to show the birthplace of Alexander and the cities he reduced to submission early in his career. From a wall map his journey into Egypt was traced and Alexandria was located and considered. From the same map his expedition to the Persian Empire was studied. A small map of the Tigris and Euphrates Valley, drawn upon the blackboard, showed his conquests there. From the wall map his campaign in India and his return across the desert of Baluchistan were studied. Climate and topography are taught at the same time in terms of human conditions and achievement.

DRAKE'S VOYAGE AROUND THE WORLD

This is, evidently, a lesson in journey geography. On a wall map Drake's voyage across the Atlantic and through the Strait of Magellan was followed. The class stopped with him to plunder the Spaniards, visited the western coast of the United States, and then returned home to Europe by his western route.

Exercises by the pupils formed a part of each lesson. These exercises included a review of the previous lesson, the location of places and routes mentioned on outline maps of the country, or the written description of a scene, a place, or a person of an earlier lesson. The geography text-book which happened to be a part of each child's equipment was used constantly as a source of material and as an atlas. Pictures were freely used as illustrations and not infrequently mementoes of the places and peoples were available.

A list of subjects, with a few sources, comprises the larger part of this paper. The list is offered for two reasons. In the first place, it may serve as a working hypothesis for any one who may desire to introduce a similar feature or to enlarge an incipient use of this idea. Again, the list, confessedly arranged for tentative use, has proved so successful in its application to this grade and class of children that the writers are encouraged to commend it. We have omitted from the list, for the sake of brevity, subjects which were topics of lessons but which are found in most courses in geography. These include certain of the large cities, industries, and the like. Under France, for example, while a consideration of the topics given below might include a great deal about Paris, the city was made the text of a lesson which included some new matter and much that was review.

THE NEAR EAST

Story of Creation, *The Modern Reader's Bible,* Moulton
Phaeton, *Myths of Greece and Rome*
The Deluge, *The Modern Reader's Bible,* Moulton
The Pharaohs of Egypt, *Eastern Nations and Greece,* Myers
Rameses, the Great, *Eastern Nations and Greece,* Myers
Assyrians and Chaldeans, *Eastern Nations and Greece,* Myers
Nebuchadnezzar, *Eastern Nations and Greece,* Myers
Darius and Cyrus, *Eastern Nations and Greece,* Myers
The Trojan War, Translation of the Iliad
Alexander, the Great, *Eastern Nations and Greece,* Myers
Phidias and Pythagoras, *Eastern Nations and Greece,* Myers
Perseus and Atlas, Bullfinch's *Mythology*
Scylla and Charybdis, Bullfinch's *Mythology*
Jason and the Golden Fleece, Bullfinch's *Mythology*
Abraham, *The Bible Story,* Bennett and Adeney
March of Israelites out of Egypt, *The Bible Story,* Bennett and Adeney
Solomon and the Temple, *The Bible Story,* Bennett and Adeney
The Queen of Sheba, *The Bible Story,* Bennett and Adeney
Menelik of Abyssinia, *Abyssinia,* Skinner

NORWAY, SWEDEN, AND DENMARK

The Land of the Danes, *Europe,* Carpenter
The "Twilight of the Gods" (Edda), *Norse Stories,* Mabie
The "Legend of Skadi" (Larcom), *Northern Europe,* Pratt
The Midnight Sun, *Northern Europe,* Pratt
The Vikings, *Around the World,* Carroll; *Story of the Nations,* Boyesen
Fiords and Mountains, *Europe,* Carpenter
Thor, *Old Norse Stories,* Bradish
Swedish seasonal festivals, Stoddard's *Lectures;* Hans Christian Andersen
Bergen: Story of Grieg, *Century Magazine,* LXXV, Nov., 1907
Hans Brinker, Dodge
Finns and Lapps, *Strange Peoples,* Starr

SCOTLAND

The McGregors and Stewarts, *The Scottish Clans and their Tartans*
Rob Roy, *Appleton's Home Reading Books,* Harris
Highlands and Lowlands, *Europe,* Carpenter
Lady of the Lake, Scott
Robert Bruce and the Spider, Scott
Queen Mary, *Franklin Sixth Reader,* Lingard

IRELAND

The Hill of Tara, Stoddard's *Lectures*
Irish Stories, *Myths and Folk Lore of Ireland,* Curtin; *Ancient Legends and Superstitions of Ireland,* Lady Wilde

ENGLAND

King Alfred, the Dane, *Stories from English History,* Warren
King Canute, the Dane, *Stories from English History,* Warren

Little Prince Arthur, *Stories from English History,* Warren
Queen Elizabeth, *Stories from English History,* Warren
Sir Galahad, *Heroes Every Child Should Know,* Mabie
Robin Hood, *Heroes Every Child Should Know,* Mabie
Richard, the Lion Hearted, *Heroes Every Child Should Know,* Mabie
Shakespeare, *Shakespeare, Life, Art, and Character,* Hudson
The Story of the Armada, *Stories from English History,* Warren
Drake's Voyage, *Stories from English History,* Creighton
Queen Victoria

FRANCE

Roland, *Heroes Every Child Should Know,* Mabie
St. Louis, *Heroes Every Child Should Know,* Mabie
Joan of Arc, *Red True Story Book,* Lang
Louis XIV, *Growth of the French Nation,* Adams
Lafayette, School Histories
Napoleon, School Histories
The Louvre, Stoddard's *Lectures*
Millet, *French By-Ways,* Johnson
"The Marseillaise"

SPAIN

The Cid, *Heroes Every Child Should Know,* Mabie
The Alhambra, Irving
Ferdinand and Isabella, *General History,* Myers
Murillo, *Famous European Artists,* Bolton
Bull fights, *Mexico,* Campbell

PORTUGAL

Bartholomew Diaz, *Text-books in History*
Vasco da Gama, *Text-books in History*
Ferdinand Magellan, *Text-books in History*
Lusiad; Camoens, *East of Suez,* Penfield
Lisbon earthquake, *First Book in Geology,* Shaler

ITALY

Romulus, *Plutarch,* Edited by Kaufman
Aeneas, *Plutarch,* Edited by Kaufman
Caesars, Julius and Augustus, *Plutarch,* Edited by Kaufman
Nero, *Famous Men of Rome,* Haaren and Poland
Pope Gregory and the Calendar, *Elements of Astronomy,* Young
Michael Angelo, *Italian Painters,* Jameson
Leonardo da Vinci, *Italian Painters,* Jameson
Vesuvius, *First Book in Geology,* Shaler
The Home of Columbus, *Europe,* Carpenter
Garibaldi, *Rise and Fall of the Roman Republic,* Mario
Marconi, *Boy's Second Book of Inventions,* Baker

HOLLAND AND BELGIUM

William II, Prince of Orange, *Story of the Nations,* Rogers
Antwerp and the Armada, *Story of the Nations,* Rogers

The Hague and the Peace Conference, Pamphlets of Amer. Peace Soc.
Rembrandt, *Review of Reviews,* July, 1906; *Great Artists,* Keyson
Waterloo, *History of Modern Europe,* Lodge
Leopold and the Congo, *Review of Reviews,* July, 1903.
Wilhelmina, Queen, *Sovereign Ladies of Europe,* Bothmer

GERMANY

The Rhine-Gold, *Wagner Opera Stories,* Barber
Siegfried, *Heroes Every Child Should Know,* Mabie
"Wacht am Rhein"
Maus Tower on the Rhine, *Europe,* Carpenter
"God's Judgment on a Wicked Bishop," Southey
"Lorelei"
Beethoven, *Masters of Music,* Chapin
Charlemagne, *Story of Nations* (Germany), Baring-Gould
Frederick, the Great, *Story of Nations,* Baring-Gould
Bismarck, *Sketches of Eminent Statesmen and Writers,* Hayward
Emperor William III, *Europe,* Carpenter

AUSTRO-HUNGARY

Tyrol Vineyards, Stoddard's *Lectures*
Andreas Hofer, Stoddard's *Lectures*
Oberammagau, *Art in the Mountains,* Blackburn
Lake Garda, Stoddard's *Lectures*
Louis Kossuth, *Life of Louis Kossuth,* Headley
Vienna, *Journal of School Geography,* IV, 175, 1900
The Danube, *Europe,* Carpenter
Francis Joseph, *Review of Reviews,* Jan., 1898

SWITZERLAND

William Tell, *Heroes Every Child Should Know,* Mabie
Climbing the Matterhorn, Whymper
Glaciers, *Forms of Water,* Tyndall
The Lion of Lucerne, Stoddard's *Lectures*
St. Gotthard and Simplon, Guide Books
Saint Bernard, *Men of Might,* Benson and Tatham
"The Prisoner of Chillon," Byron

RUSSIA AND SIBERIA

Partition of Poland, *Poland, the Knight among Nations,* Van Norman
Kosciusko, *Poland, the Knight among Nations,* Van Norman
Copernicus, *Stories of Great Astronomers,* Holden
Chopin, *Masters of Music,* Chapin
Paderewski and Modjeska, *Poland, the Knight among Nations,* Van Norman
Crimea, *Stories from English History,* Warren
"Charge of the Light Brigade," Tennyson
Peter, the Great, *Northern Europe,* Pratt
Ivan, the Terrible, Waliszewski
Exile System of Siberia, *Siberia Exile System,* Kennan

JAPAN AND KOREA

How Jimmu was made the First Emperor of Japan, *Story of Japan,* Van Bergen
The First Invasion of Korea, *Story of Japan,* Van Bergen
The Forty-seven Ronin, *Story of Japan,* Van Bergen
Perry in Japan, *All about Japan,* Brain
Mutsuhito, Emperor of Japan, *Story of Japan,* Van Bergen
Life of the Japanese, *Big People and Little People from Other Lands,* Shaw
The Lake of the Lute, *Japanese Fairy World,* Griffis

CHINA

Confucius, *The Story of China,* Van Bergen
The Chinese Wall, *The Story of China,* Van Bergen
Li Hung Chang, *The Story of China,* Van Bergen
Opium War, *The Story of China,* Van Bergen

INDIA

The Kandyan Chiefs of Ceylon, *East of Suez,* Penfield
The Pearl Fisheries, *East of Suez,* Penfield
The Parsees of Burmah, *East of Suez,* Penfield
The Maharajah of Jeypore, *East of Suez,* Penfield
India's Ancient and Modern Capital, *Asia,* Carpenter

A PLEA FOR SANITY IN SCHOOL WORK.—The National Education Association, at its meeting in Cleveland on July 1, adopted a declaration of principles, two paragraphs of which are particularly pleasing.

"We recommend the subordination of highly diversified and overburdened courses of study in the grades to a thorough drill in essential subjects; and the sacrifice of quantity to an improvement in the quality of instruction. The complaint of business men that pupils from the schools are inaccurate in results and careless of details is a criticism that should be removed. The principles of sound and accurate training are as fixed as natural laws and should be insistently followed. Ill-considered experiments and indiscriminate methodizing should be abandoned, and attention devoted to the persevering and continuous drill necessary for accurate and efficient training; and we hold that no course of study in any public school should be so advanced or so rigid as to prevent instruction to any student, who may need it, in the essential and practical parts of the common English branches.

"We assert that the individuality of the pupil should be carefully considered, to the end that he may be instructed in the light of his limitations and capacity; and we commend to all local authorities the necessity of greater care in the arrangement of courses of study, that they may be adapted to the pupils to be instructed, rather than that pupils should be adapted to fixed courses of study and an inflexible system of grading."

SOME SUGGESTIONS CONCERNING A COURSE OF STUDY IN GEOGRAPHY

By RICHARD ELWOOD DODGE

WHAT IS GOOD GEOGRAPHY TEACHING?

GEOGRAPHY teaching to be good and most efficient must obviously be first and foremost good teaching, judged from the widest point of view. The teaching of geography, like the teaching of other subjects, involves the subject, the teacher, and the children who are being taught. The subject can be readily organized and classified so that it is definite and the same for all persons and places. But the teacher and the children are personalities which can not be systematized and classified according to rule. Hence the method of approaching the subject must be varied to suit, so far as possible, the particular needs of the children with which the teacher is dealing. The subject should be so thoroughly a part of the teacher's knowledge that through it she can use her best personal powers to teach the varied children to their best profit, perhaps changing the method of approach or the point of view for different individuals. This is a difficult task, successfully accomplished only by the most expertly trained "natural teachers." Certain principles are, however, applicable to all conditions and should be borne in mind by all teachers.

The work in geography should always proceed from the known to the unknown to prevent floundering and in order to follow the lines of least resistance. The work should further be arranged to give the children the best mental training and the best grasp of the subject not primarily as a subject, but as a tool in everyday life. No teacher can succeed in giving the best training if, at least in the earlier years, she puts the development of the subject ahead of the development of her pupils. In the later years the development of the pupils may best be approached in such a way as to develop the subject, but this is not always true in a fine sense, though it is true that the best teaching is that teaching which lays an increasingly strong foundation for the best study and use of different subjects in the later years.

Good geography teaching differs from good teaching only in that it is a specialized phase of teaching. Good geography teaching is teaching that is sound geographically and which will be judged so by geographers when they view not merely the results of the day or the year alone, but as related to the ultimate results to be gained from the school course as a whole. Good geography teaching necessitates a choice of topics, in order

to gain the greatest efficiency in the long run, and to encourage the most rapid and strong development of the mental powers of the pupils. More permanent than the immediate facts to be used in everyday work are the permanent acquisitions in the way of knowledge of principles, to be the outgrowth of the study of facts as the years go on.

Good geography teaching must be pertinent to the child's present abilities, must deal with facts of immediate use, must lead to the knowledge of facts and principles of the greatest permanent value, and must be sound pedagogically as well as geographically.

Such teaching does *not* mean that the method of approach at all steps should be the method of the adult mind, but such a varying point of view as will in the course of years best develop the adult method of learning.

Therefore the work should not always be from causes to consequences, as is the method in later study.

We sometimes see this stated to the effect that we must follow the "pedagogical method and not the logical" method of approach, as if the pedagogical method were illogical, as it often is. Any method is logical when the later stages of the work are the natural outgrowths in definite sequence of the earlier stages. Good pedagogy demands such a method at every stage of procedure. Hence we should recognize in geography that the best logical method and the best pedagogical method is at one time from consequences to causes and at another from causes to consequences. The latter is the method of the later years, which will be more fully developed in adult life. The former is the method of the earlier years. Both methods of procedure demand a logical sequence of topics and steps and both are pedagogical. To reverse the time of emphasis might be very bad pedagogically, as it certainly would be if one method were followed throughout the grades, as it has been until recent years. Good geography teaching also demands that the teacher fit her "methods" to the subject and to her special needs, and that no particular "method" shall be followed exclusively.

Courses of study organized to exploit a "method" are weak and inefficient in that the major emphasis is on the means rather than on the end in mind. A subject as inclusive, as complex, at times as difficult as geography can not be taught by any "method" that does not consider the purposes of geography teaching, the best ways of reaching those purposes, and the organization of the subject as a subject. Many plans of teaching geography have been advanced within recent years, each good in its place but no one of which is valuable at all stages of progress.

To make use of imaginary journeys, *i.e.,* to follow the "journey

method," is an excellent plan of procedure at times, but imaginary journeys around the world do not prove its globular form, and no system of imaginary journeys, except in the hands of an expert teacher, can give an adequate idea of political or physical divisions of the world, and such journeys will not readily lead to good, broad, ever-valuable summaries—the vital and permanent results to be gained from a complete course in geography.

In the same way teaching by "types" is weak from the geographical standpoint if followed too fully, though this "method" is very helpful in certain years. The teaching by "types" is founded on the thought that geography being a study of the earth in its relation to man, it should be easily possible to pick out certain strategic relationships, illustrated in some particular locality, to teach these few centers with care and to use them as bases of comparison by similarity and contrast later.

Unfortunately, however, the responses of life to its physical and social environment have not yet been thoroughly and completely organized by the expert students of the subject. Therefore until the subject is thus organized it is impossible for any one—even a geographer—to choose from the whole field those few selected centers which will give an outlook on the whole subject, and through the study of which the subject may be adequately treated in its larger units. The study of "types" in the hands of a master will be strong and vitalized, but the mere follower of a "method" will probably ignore the large topics and phases of the subject and the pupils will not gain adequate ideas of the political divisions of a country, of the broad distribution of its climatic features, vegetation, industrial features, etc.

The same criticism will hold in reference to the "map drawing" method and to various other methods that might be mentioned.

The "topical method" so-called, that is, the plan to follow a certain order of topics, working from the large and general outwards to the smaller and more local, is helpful, like the other methods, at certain stages of progress and is generally adopted in upper-grade work. This "method," however, has its very obvious limitations and can not be followed blindly if teachers would give variety to their work and make their pupils think.

SOME LARGER PROBLEMS CONCERNING THE DIVISION OF THE COURSE OF STUDY

Supervisors and superintendents find in the making of a course of study in geography one of the most difficult tasks with which they are confronted, and yet it is a necessary task for the reason that no one course of study

can fit the particular conditions of all localities. There are certain large principles that should be considered in every course of study, and the experience of the generations has shown that, in general, school geography must follow a certain rough plan. The mental development of the children for which the course is made, the length of time the majority will remain in school, the particular physical and industrial surroundings of the locality, and many other special conditions make it advisable, if not necessary, to have a course of study for any place that will in some ways be different from that of any other place, while at the same time it meets the demands of good geography teaching, as already outlined.

Courses of study may be divided into four groups: (*a*) those which demand the covering of so many pages per year in a given text-book; (*b*) those which are outlined to teach the subject by a certain method; (*c*) those which are made up like a patchwork quilt of inviting scraps from many unrelated and uncriticized courses of study; and (*d*) those which are constructed soundly, sanely, and carefully to teach the children of a certain region geography.

The first class is unfortunately at present the largest in number, regardless of the fact that a text-book, written to be used in all localities, can not be the best course of study for any teacher who can not secure a more personal course, but every teacher should be able to make the text her slave and not be the slave of the text.

Courses of the second class are relatively few in number, as they should be, for here again a certain formal treatment with many valuable factors is imposed on all regions, regardless of local conditions.

Courses of the third class are perhaps the weakest in character and are unfortunately numerous. No course of study not outlined consistently as a unit can have ultimate strength, because the various parts do not interlock as the parts of a unified course should.

Courses of the latter group are becoming more common every day and our teachers in training are being taught how to fit the subject to the local conditions and how to train the child to do good work in the subject. The best work can only be done when such a course of study is in hand and is followed thoughtfully, intelligently, and sympathetically, with due regard to the purposes of the work as a whole and the gain to be expected each year.

Wherever the locality, however, and whatever plan is followed there are certain larger divisions in a course of study in geography that are now recognized as proved to be the best, and which are borne in mind by all workers in the field. It is because these divisions have been proved and

are recognized that it is possible to outline courses and texts that in a large way may be used as guides broadly.

THE DIVISIONS OF THE COURSE

The first division, only lately recognized and approved in this country but long ago adopted abroad, is what we call Home Geography. All the leaders in school geography teaching recognize the pedagogical and geographic strength of this phase of the work as a necessary foundation in later work.

There is also a general agreement that the study of Home Geography should lead up to a knowledge of the simpler elements of the world as a whole. It is also generally recognized that Regional Geography should occupy a larger part of the course, and that we may divide this work into that of the intermediate years and that of the upper grades. Leaders of thought are, however, not agreed as to the number of times *all* the continents shall be studied in the grades. Many courses of study require a consideration of all the continents twice. This plan, however, usually requires the work to be too hasty and too scattered to be of the greatest advantage to the pupils.

There is an equally strong objection to the plan of studying none of the continents more than once, as is advocated by some. It is obvious, considering the fact that many children leave school by the end of the fifth or sixth year, that the United States and North America should be studied early in the course. These are the most important regions to us all and the ones we need to know the best and before we take up any foreign regions. Hence it would seem beyond question that our own country should be studied first of all countries. It ought also to be studied again as late as possible in the course so that pupils will gain as advanced a knowledge of their own country as their abilities will permit. The same argument holds true for the countries of western Europe and perhaps for some of the countries of southeastern Asia.

The best course of study, judged from the standpoint of utility, permanent effectiveness, and worth, would seem to be one that called for the study of certain regions twice—once early in the course, and once later in the course from as advanced a standpoint as possible.

The more progressive courses of study in recent years advocate such a plan, leaving South America, a large part of Asia, Africa, and Australia to be studied but once at such a time in the course as may seem more practical.

Some may be studied in the intermediate years and some in the higher grades. Hence text-books generally treat all the continents twice so as to

fit all courses of study as closely as possible, with the expectation that the continents and countries of lesser importance will not be studied twice just because a series of texts includes them twice.

THE CHANGE OF PLAN IN THE INTERMEDIATE AND UPPER GRADES

The plan of procedure requires that the method of approach of a continent be different in the intermediate grades from what it is in the advanced grades. The old-fashioned "concentric" plan called for the study of all the continents from the topical standpoint, working from causes to consequences but bringing out little of the causal idea. Children of the intermediate years are as a whole too immature for such a plan and hence good teaching requires a plan that will be more adapted to their abilities. Also there should be variety in the plan as the years go on so that the best thought work may be promoted. The same plan followed blindly becomes so hackneyed that it provokes no thought response from the pupils.

Children in the intermediate years are more interested in the life relations found in a region. They have a greater acquaintance with these familiar but perhaps little understood life relations to be seen in their own locality. The method of analysis followed in Home Geography should therefore be followed in a similar way in the intermediate grades, and out of such an analysis should be developed an understanding and appreciation of the causal controls of life. In the later years the pupils are prepared for a more advanced study from causes to consequences.

The movement from consequences to causes in the earlier regional work, however, demands a brief introductory treatment of the larger features of surface and climate to give the setting for the life conditions to be analyzed later.

To go from consequences to causes in the earlier work and from causes to consequences in the later work is to take advantage of children's interests, to have the work related to their abilities, to keep up interest in the work, and to provoke application by making the work varied and constantly thought provoking.

Such a general plan of procedure seems to be the best thus far evolved as the result of experience, of a study of what good geography teaching should be, and of the applications of the principles of good teaching to the subject.

THE PLACE OF PHYSICAL GEOGRAPHY IN A COURSE OF STUDY

The place that Physical Geography should occupy in a course of study has probably been more discussed and more experimented upon than any other phase. Physical Geography obviously has a right to more than pass-

ing emphasis in any well-ordered course of study. As it is the larger part of the causal side of geography, certain phases of the subject have an eminently practical application in the interpretation of everyday life; it offers an opportunity for excellent observational work and it considers certain processes that can be seen in operation by children and which therefore appeal to a child who likes to observe power and activity. There is a great danger, however, in too strong attention to Physical Geography. If studied in the earlier years teachers will probably devote too much time to the subject and time that might better be devoted to more necessary and pertinent phases of the subject. Such a treatment postpones the more valuable side of geography to too late a time and gives the wrong outlook on the subject for beginners. Life geography and not the physical features is the phase of the subject that from every consideration deserves the greater attention in the earlier years and in the course as a whole.

THE PLACE OF PHYSICAL GEOGRAPHY

The physical side of geography naturally comes into the course at three distinct places, though certain aspects of the subject are used constantly throughout the work. In Home Geography certain phases of the physical environment need to be emphasized because they are some of the most striking features with which children come in contact and also because they give an opportunity for observational work which is particularly effective. Observational work needs to be based on definite things and on objects or relations that can be readily seen and understood by the pupils. A child can more readily see and study the slopes that inclose the valley about his home than he can some of the larger, more general facts of the life environment. The directions of movement should be from the definite and personal to the larger, more general, and impersonal. Hence the value of including the study of certain physical features in Home Geography.

The physical side must also be considered constantly in the study of the world by regions. The understanding of the physical conditions of climate and topography is important in all regional work. In the intermediate grades this understanding should be developed through the study of the life consequences centered about any locality. It should be borne in mind, however, that no efficient or satisfactory study of any region is possible from the life side unless that region is placed somewhere. Hence any regional work in the intermediate grades needs to be introduced with a brief consideration of the physical features which are necessary to give a setting to the picture to be studied.

Out of a study of the lives of people from the causal standpoint, in the intermediate grades, should be developed an increased understanding of the importance of the controls of life over the world. These controls we usually find thoughtlessly spoken of as physical controls, but the controls of man over the world are something more than mere climate, surface, and oceans. The distribution of plants and animals, of the races of men and of the great nations, is equally important. Hence we better speak of these controls as the Principles of Geography, and bear in mind that out of the study of places, with their attendant facts of life and physical features, should be developed certain generalizations as to the reasons for these things.

These generalizations should be the summaries which are constantly being brought out, developed, and criticized in the intermediate grades, the causes coming out of the study of consequences.

Before any work is undertaken in the study of regional geography from a more advanced standpoint, the principles which have been considered more or less individually, thus far, need to be amplified a bit, related, systematized, and studied with sufficient thoroughness so that they can be used as a basis of work in the upper grades. Hence at this stage of progress the study of regional geography, as such, should be interrupted by a brief study of the Principles.

The physical features are basal in determining the larger questions of life distribution, and therefore the simpler elements of Mathematical and Physical Geography deserve first and strong emphasis at this time. Here Physical Geography rightly receives greater emphasis as a thing by itself than at any other stage of the work. It is necessary, however, to keep in mind here, as elsewhere, that we are not studying physical geography for itself, but as a vital and related part of a larger subject. Our choice of details and the emphasis to be given to the elementary principles will therefore be determined by the purposes toward which we are striving. With this basis of principles well developed, the regional geography of the upper grades should be approached from causes to consequences.

These Principles are usually summarized in the so-called "Introduction" to the larger book in geography, and many teachers cover this introductory material as if it were a "Preface" to be read and forgotten. On the contrary, these Principles are introductory to good work in the upper grades, and therefore should be constantly used and applied in all succeeding work.

Thus Physical Geography and the principles of life geography are an important part of the course in geography, and they should receive our attention at such times and so long as is necessary for developing the whole course strongly.

ECONOMIC NOTES

By EDWARD VAN DYKE ROBINSON
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GERMAN COLONIES.—Although Germany was the last of the great nations to enter upon colonial expansion, it is making notable progress in various ways, especially in the provision of transportation facilities. In German East Africa the line from the seacoast at Dar-es-Salaam to Mrogoro is practically complete. In German Southwest Africa the railway from Lüderitzbucht to Keetmanshoop is also nearing completion. The road is to be extended ultimately to Windhoek.

German Southwest Africa, while very dry near the coast, is in some districts moist enough for pasturage and even for agriculture on the elevated plateaus in the interior; and while the country is in some respects the least attractive of the important German colonies, it has one great advantage. It is the only German colony of any size where the climate is sufficiently temperate for the white race to flourish without a difficult process of becoming acclimated. Indeed, it is not yet established that the North European type of the white race can become acclimated in the tropics, except at considerable elevations above sea level.

RAILWAY TO MECCA.—Contrary to the general expectation when the work was undertaken, the railway which the Sultan of Turkey has been building southward from Damascus toward Mecca is well advanced toward completion. It is now being built from Medina north as well as from Damascus south, and an order has been issued to begin work from Medina to Mecca, a distance of 280 miles. This road is in some respects the most interesting of the recent railway projects, being undertaken for religious reasons by followers of a religion which has been supposed to be irreclaimably opposed to modern European progress. Behind the religious reasons, however, lurk political reasons. The Sultan claims to be the religious head of the Mohammedan world, and in order to maintain this claim it is necessary for him to have control of Mecca. In recent years the Arabs have submitted with more and more impatience to Turkish rule, and without a railway to Mecca it has become a question whether the Sultan can maintain his hold there.

THE PRICE OF COTTON.—In recent years there has been a great agitation in England, Germany, and France regarding the alleged extortionate prices for American cotton. In England especially an association was formed several years ago with a capital of £2,000,000 to encourage cotton

growing in the British colonies and protectorates. The area devoted to cotton growing in India is being extended by the further development of the irrigation system, so that in 1906 the acreage was 22,000,000 and the yield 1,963,000,000 lbs. The culture of cotton has also been taken up in nearly all the tropical possessions of Great Britain. The largest yield next to India and Egypt was obtained in Africa, where there are large districts in the Sudan region said to be admirably fitted for the growth of cotton. It appears that in the West Indies the yield has not been large as yet, but it is large enough to indicate that the islands collectively may become a factor of some importance in cotton production. In view of the extension of cotton culture in other countries, it would hardly seem to be a propitious time to force the price of cotton to unreasonable heights in this country by market pools among the speculators or combinations among the growers.

Exports to Canada.—In spite of the tariff preference amounting to about 1 to 3 in favor of British as against American goods, the exports of the United States to Canada continue to increase. This illustrates the extent to which similarity of conditions in the two countries, causing need for similar products, is able to offset tariff differences. There is no doubt that the possibility of having an order filled in much less time is also a factor, as it enables the wholesalers in Montreal and Quebec to carry a smaller stock; in other words, to turn over their capital much more frequently.

A New Manchurian Railway.—In Manchuria the light narrow-gauge railway laid by the Japanese as they advanced has been connected with the Korean line at Antung, and with the Manchurian railway at Mukden. At the other end of the Korean line ferry steamers carry the trains across the strait between Fusan and Japan. In this way it is now possible to go from Tokyo to Paris by rail and train ferry. The narrow-gauge railway is to be transformed into a standard gauge, and when that is accomplished there will be only one change of cars necessary on the trip previously indicated. That change will be at the boundary in Manchuria between the Japanese and Russian sphere of influence, and will be due to the fact that the Russians have a very wide gauge, while the Japanese use the standard gauge.

The Control of Railways in Mexico.—In Mexico the most interesting experiment in the history of government relationship to railways has recently been undertaken. The government there has made a railway merger of its own, using substantially the same methods which were represented by the Northern Securities Company. The government, in other

words, bought a controlling interest in the stock of a number of different roads, amounting in all to about 10,000 miles, including all of any importance in the country. It then chartered a holding company to which it turned over the stock of these roads, retaining itself a majority of the stock in the holding company. The railways thus remain under the control of private corporations, and there is neither government management nor, in the ordinary sense, government ownership; but the government, like any individual, simply owns stock in a corporation, which in turn controls a number of other corporations. This may prove to be a contribution toward the solution of the railway problem in countries where government supervision does not prove effective.

A New Pacific Railroad.—From time to time announcement is made that a new line is shortly to be pushed through to the Pacific coast in Mexico. Up to the present time, however, the only railways which have reached the coast are the Southern Pacific, which runs down from Arizona, and the Tehuantepec line across the Isthmus of Tehuantepec. The Mexican government has, however, undertaken very expensive harbor improvements at Manzanillo and it is believed that railway connection with that port will be secured in the near future. A franchise has also been granted for the extension of the Southern Pacific system down the Pacific coast and inland from San Blas to Guadalajara, thus affording still another outlet from the plateau to the Pacific.

Another interesting project is that known as the Kansas City and Orient. The story (which the writer does not vouch for) goes that the president of this company (Mr. Stillwell), who also built the Kansas City Southern but lost it to some Wall Street sharks, took a string and measured the map until he found the shortest distance to the Pacific ocean, and then proceeded to get a franchise and begin building the road before he knew anything about the country through which the road was to pass. Both country and grades, however, turned out to be very favorable. The line is being built from both ends and at several intermediate points. The Pacific port will be Topolobampo, said to be the best port on the Pacific except Acapulco, which is inaccessible owing to the sheer descent of the mountains just behind the town.

The Port of Tampico.—Since the construction of breakwaters at the mouth of the river, the port of Tampico, Mexico, has forged ahead and it is now the equal of Vera Cruz if, indeed, not the principal commercial port in the country. Since the merging of the Mexican railways under the title of the National Railways of Mexico, it is likely that a direct line

will be built between Tampico and the City of Mexico, which will tend to give it still more commercial prominence. The climate is decidedly better than at Vera Cruz, and the slope up to the plateau is much less abrupt.

MANGANESE IN INDIA.—During the war between Russia and Japan the supply of manganese ore from Russia fell off, with the result that the price rose considerably. In answer to this demand, the output of such ore in India was largely increased and new deposits were opened. It now seems likely that the Indian mines will retain this position, and perhaps become the most important sources of manganese ore. This ore, it is well known, is used in the manufacture of steel to toughen the steel.

DAIRY PRODUCTS IN THE ORIENT.—Owing to the extremely dense population in China and in Japan domestic animals are few and far between, aside from poultry and pigs in China. For this reason dairy products were little known until contact began with Europeans. At first all dairy products were regarded with abhorrence, much as Arabs are said to regard the eating of oysters, and as Chinese still regard the eating of cheese. In recent years, however, butter has begun to come into use and there is said to be quite a fad in Japan for drinking milk. It is taken much as Americans would take medicine, with the idea that since they don't like it, it must be good for them.

COMMERCIAL LANGUAGES.—From the days of the Crusades the principal foreign language used in western Asia has been French; in fact there grew up in the ports of eastern Asia a mongrel dialect called Lingua-Franca, "Franks" being the name by which the French were known to the Mohammedans. This language is still commonly spoken in the ports; but the commercial houses avail themselves of pure French in their correspondence. Turkish, while the official language, is nowhere used for business purposes to any considerable extent; and in fact it is hardly spoken outside of official circles south of the plateau of Anatolia. Next to French, English and Greek are most extensively used.

SECONDARY SCHOOL GEOGRAPHY.—What kind of geography should be offered in secondary school courses is a problem which is constantly receiving more and more attention, as is evidenced in many ways. The Science Section of the National Education Association, at its recent meeting, voted to appoint a committee of seven to study and report on this problem. The membership of the committee will be announced soon.

RECENT PUBLICATIONS

CLIMATE—CONSIDERED ESPECIALLY IN RELATION TO MAN. By Robert DeCourcy Ward; pp. xv+372. New York, G. P. Putnam's Sons, 1908.

A readable book for the general reader and student. The best book on climate and generally serviceable. Contains eleven chapters, including three on The Characteristics of the Zones, originally published in the JOURNAL. Deserves wide usage and high commendation.

MAURY-SIMONDS PHYSICAL GEOGRAPHY. By M. F. Maury, revised by Frederic W. Simonds; pp. 347. New York, American Book Company, 1908.

A time-honored book brought down to date. Well illustrated and usable. More inclusive than several of the more modern books. The chief defect is a style that tends to cause memorizing rather than reasoning. Well illustrated and well printed.

THE CLIMATE AND WEATHER OF BALTIMORE. By Oliver L. Fassig; being special publication, Volume II of the Maryland Weather Service; pp. 515. The Johns Hopkins Press, 1907.

A very complete special study covering more than the title indicates. More than amply illustrated by diagrams and maps. Should be at the service of every normal school teacher of geography or physical geography.

PRACTICAL EXERCISES IN PHYSICAL GEOGRAPHY, WITH ATLAS. By William Morris Davis; Boston, Ginn & Company, 1908.

The most ambitious laboratory guide in physical geography which has yet appeared. Most detailed in directions and full of good suggestions. Somewhat advanced for beginners of immature age. (To be reviewed later.)

OUT OF DOOR STUDIES IN GEOGRAPHY. By F. M. Fultz; pp. 111. Bloomington, Ill., The Public School Publishing Company, 1908.

A well illustrated, simply written, special volume devoted to the surface and soils of the Upper Mississippi Region.

ELEMENTS OF PHYSICAL GEOGRAPHY. By Thomas C. Hopkins; pp. ix+484. Benjamin H. Sanborn & Company, Boston, 1908.

A new book covering much the same field as its predecessors, written simply and splendidly illustrated. The systematic side has been subdued and the "life side" made more prominent than is usual. The order of topics is not always pleasing, but a text can be used in any order desired by the teacher. A good book for beginners, but perhaps not severe enough for college entrance work. Lacks proper emphasis of laboratory work, and this is its chief weakness.

NOTES

PHYSICAL GEOGRAPHY AS AN ESSENTIAL PART OF SCHOOL GEOGRAPHY.—I now propose to give you a few specimen lessons in physical geography, and as I am speaking to practical teachers I make no apology for putting before you examples of the simplest kind. My object is to indicate one possible method of teaching, not necessarily the best, but at any rate one which has the merit of having been tried with some success. The sketches, which I shall show you on the screen, would in the ordinary geography lesson be drawn on the blackboard as the lesson proceeded, while the pupils themselves would draw diagrams, rough sketch maps, fill in outline maps, etc., either during the lesson or as part of their home work.

I. *Coast Line.*—The old-fashioned way was to teach the capes, bays, etc., without any reference to the land surface—*e.g.,* the north coast of Yorkshire is the edge of the Wolds; Beachy Head is the end of the chalk range, the South Downs, etc. The high cliffs of the South Foreland, constantly being worn back, may be contrasted with the low-lying Dungeness slowly advancing seawards. Capes and bays should not be taught because they are capes and bays, but because there is some special feature connected with them.

II. *Water-Partings.*—Boys who have been taught on the topographical plan usually have erroneous ideas about water-partings. If asked to point them out on a map of Europe, they show mountain ranges like the Alps, Pyrenees, etc., but they omit altogether low-lying water-partings like those which cross Russia from southwest to northeast.

III. *Climate.*—Many school geographies state facts about climate without attempting to explain the causes, or they explain the local conditions which obtain in a particular district without showing that these local conditions are in many cases mere modification of worldwide causes. Too much stress is laid on the part played by ocean currents in deciding the climate of a country, and too little attention is given to the effect of winds, while the connection of winds and currents is often lost sight of.

On referring to one well-known school book of the older type and still used in many schools, I find on looking at the paragraphs describing the climate of Europe (1) that winds are not even mentioned; (2) that the climate of the countries on the Atlantic seaboard is stated to be more humid than that of eastern Europe because western Europe is washed by the Gulf Stream. Such statements are misleading, and when reproduced by boys who have accepted them without understanding them they become

decidedly harmful, as they impede progress. After such reading as this it is not surprising to meet in examination papers the following answers: *Question.* Why has Bergen a heavier rainfall than Stockholm? *Answer.* Because Bergen faces the Gulf Stream, while Stockholm is turned away from it.

Or, again, Why does the north coast of the Black Sea freeze every year, while the Adriatic Sea, in the same latitude, never freezes? *Answer.* Because the Adriatic is warmed by the Gulf Stream.

How then is the subject of climate to be taught to boys of twelve to fourteen years of age? The best way is to commence—

(*a*) With simple lessons on the rotation of the earth on its axis, producing day and night; the revolution of the earth around the sun, producing the seasons; these, together with simple exercises on latitude and longitude, can be illustrated practically by using a globe.

(*b*) The wind regions of the world come next under consideration; the directions of the drift currents agree very closely with those of the prevailing winds. The direction of the northeast trade wind in the northern hemisphere may be explained by the two components: (1) an east wind caused by the earth's rotation; (2) a north wind caused by the difference in temperature within the tropics.

(*c*) It should also be noted that if there were no land surface then the winds would blow over the water surface as shown in the diagram, *viz.*: Trades between 30° N. and 30° S.; anti-trades between 30° and 60° of latitude both north and south of the equator (modified only by the sun's movement between the tropics); land masses, such as North and South America, Europe and Asia, with a north to south extension, do not interfere with this distribution, but the east to west extension of Asia produces the monsoons.

(*d*) Ocean currents are turned out of their course by the land masses, *e.g.*, the warm Atlantic equatorial current on reaching Cape San Roque becomes the Brazilian and Caribbean currents, but winds, except in a few cases, are not turned out of their direction by the relief of the land. We therefore lay stress on the effect of the winds as rain bearers and heat bearers, and we show the connection between the winds and rainfall.

(*e*) A useful exercise is to let pupils mark the directions of the winds on an orographical map of the world, and then shade in the districts where the rainfall would be heaviest and where least special attention would then be given to the regions of tropical and winter rains; hence four seasons in temperate regions, *viz.*, spring, summer, autumn, winter; but two seasons in tropical regions, *viz.*, wet and dry.

(*f*) We should next show the regions of vegetation due (1) to elevation and (2) to latitude, and then point out that on the above considerations partly depend the distribution of commercial products and human settlements.

(*g*) With older boys this may be followed with advantage by lessons on the distribution of temperature and pressure, with readings from isothermal and isobaric charts.

The first two isobaric charts show the annual swing of the pressure areas north and south due to the movement of the heat equator.

The third isobaric chart shows the east to west seasaw of the pressure areas, during intervals of three, four, eleven, or more years' duration. For an interesting account of this world-meteorology I must refer you to an article by W. Lockyer in the October number, 1906, of *Science Progress*.

We may now put in practice Prof. Gregory's suggestion with regard to practical work by giving statistics of rainfall, temperatures, pressures, etc., letting the pupils draw curves.

The example before you was drawn during the month of November last from statistics obtained by the boys themselves.

It illustrates fairly well the common saying that "when the glass is going down we may expect rain or bad weather."

IV. *New Zealand.*—Let us now apply what we have said to a particular region such as New Zealand; and we will suppose that this country has not been studied in detail before. Instead of hanging up a political map of New Zealand and pointing out the capes, bays, mountains, rivers, towns, etc., we place before the class a large globe, an orographical map of New Zealand, a rainfall map, a vegetation map.

Let the pupils themselves develop a line of arguments somewhat as follows: From the position of New Zealand on the globe we see that we should have to go halfway round the world to reach it from London (routes to be pointed out).

New Zealand is situated in the southern hemisphere, *therefore* its seasons will be opposite to ours.

New Zealand lies between latitude 34° and 47° S., *therefore* it is in the region of the northwest anti-trade winds.

On the orographical map we see that the mountains are on the west side of South Island, *therefore* the west coast will have a heavier rainfall than the east coast, because of the westerly anti-trade winds. The rain-swept mountains of the west will not attract settlers, unless minerals abound; flat lands present few difficulties to new settlers, *therefore* the east coast would be preferable to the west coast, and so on.

In the next place a pupil may be asked to compare North and South Island (*a*) as regards land relief from the orographical map; (*b*) as regards the distribution of rain from a rainfall map.

Now the part of the teacher comes in to supplement what the boy can not find out for himself—*e.g.*, a boy reads from his map lakes Taupo and Rotorua in North Island and Wakatipu and Te Anau in South Island. To him these are lakes and nothing more, but a real interest is given when a contrast is made between the hot-water lakes or crater lakes of the volcanic district in North Island and the irregular-shaped lakes lying in the deep, glaciated valleys of South Island. Or, again, the rias of North Island contrasted with fiords of South Island.

After this, lessons will be given on the natural vegetation, such as the kauri pine, the tree ferns, the native flax, and grass, etc., and the more recently cultivated areas.

As far as possible all these lessons should be illustrated with pictures showing typical scenes; the pupils themselves should describe the prominent features of each scene.

If these physical lessons are thoroughly understood, the lessons in commercial geography, etc., will follow as corollaries to what has gone before.

—*From The Geographical Teacher,* May, 1908.

THE ORGANIZATION AND POSSIBLE WORK OF A TEACHERS' GEOGRAPHY CLUB

1. Have an elected executive committee of five, charged with the responsibility of planning the work of the club, with organizing committees, and assigning work to individual members. The only officers should be a chairman and secretary-treasurer.
2. Let the executive committee plan a year's work which, after approval, shall constitute the program for the year.
3. Appoint sub-committees of three or more who shall each prepare the program for at least one meeting a year. At each meeting the chairman of the sub-committee responsible for the day's program shall preside.
4. Each member should be responsible for some share in the work and all should join in the discussion. Avoid lectures and formal papers, except as introductions to general discussions.
5. The results of any day's work should be mimeographed or printed in some form for use by the individuals.

6. The executive committee should be charged with the task of preparing results of general interest for publication. One member of the committee should be club reporter to send materials to the JOURNAL and to suggest to the JOURNAL articles that should be prepared for general use.
7. Committees should be organized to cover the following topics, among others:
   (*a*) To prepare a digest of the local geography for use in Home Geography and in special locality work in the upper grades.
   (*b*) To organize and conduct a series of local excursions to study physical, social, and economic geography in the community.
   (*c*) To prepare a list of bibliographic references in local geography on equipment available for classroom work on special continents and countries for teachers' use and for collateral reading.
   (*d*) To take up the study of some special region, each member preparing some special phase of the subject.
   (*e*) To consider the minimum requirement in knowledge of location.
   (*f*) To suggest books for the local library and to make the geographic resources of the local library more generally available.
   (*g*) To report on recent books or periodical publications of value to teachers.
   (*h*) To report on current geographical events.
8. Begin simply, proceed carefully, and make the work generally useful to all, while each member is a giver of help as well as an absorber.
9. Report on organization and general plan of work to the JOURNAL OF GEOGRAPHY.